

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: DAVID VENCI Examiner #: 80284 Date: 6/17/2004
Art Unit: 1641 Phone Number 30 571 272 2879 Serial Number: 09/733801
Mail Box and Bldg/Room Location: REMSEN 3C70 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: MEASURING CHELATE: ANTI-CHELATE BINDING BY FLUORESCENCE POLARIZATION

Inventors (please provide full names): DAVID KENNETH JOHNSON

Earliest Priority Filing Date: 12/10/1999

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

PLEASE SEARCH CLAIMS 1 AND 2. ALSO, PLEASE SEARCH "STRUCTURE A" AND "STRUCTURE B".

- STRUCTURE A IS A SPECIFIC EMBODIMENT OF CLAIM 2.
- STRUCTURE B IS A SPECIFIC EMBODIMENT OF CLAIM 1.

THANK YOU!

David Venci

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Searcher:

Alan

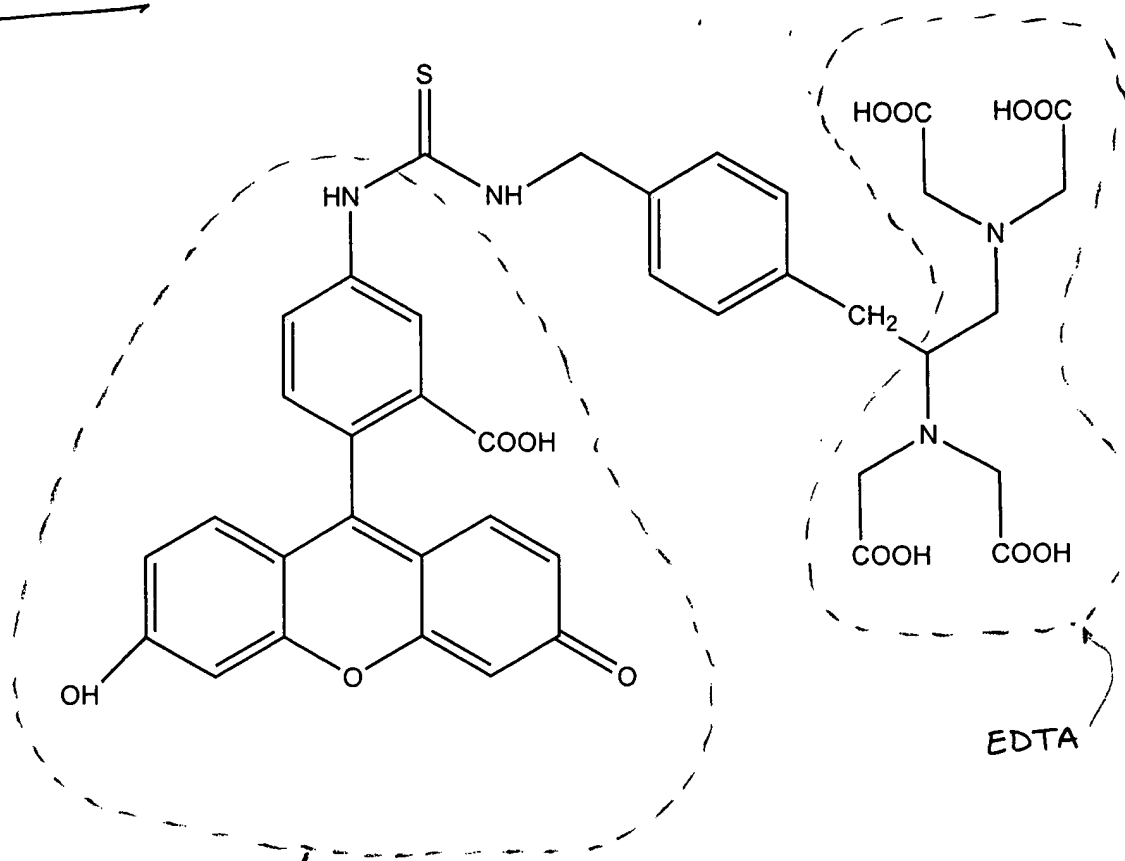
Type of Search

NA

Vendors and cost where applicable

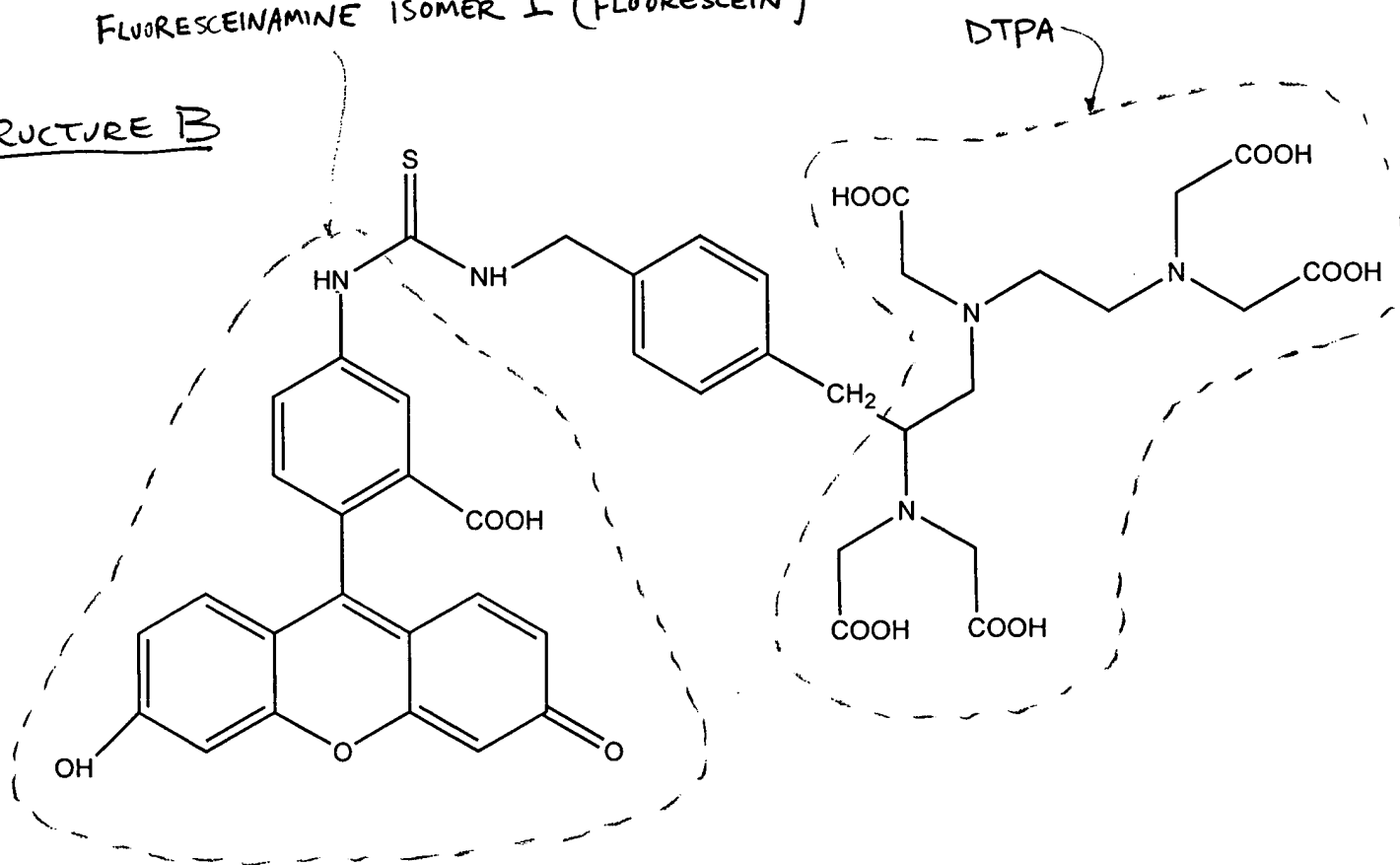
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STRUCTURE A



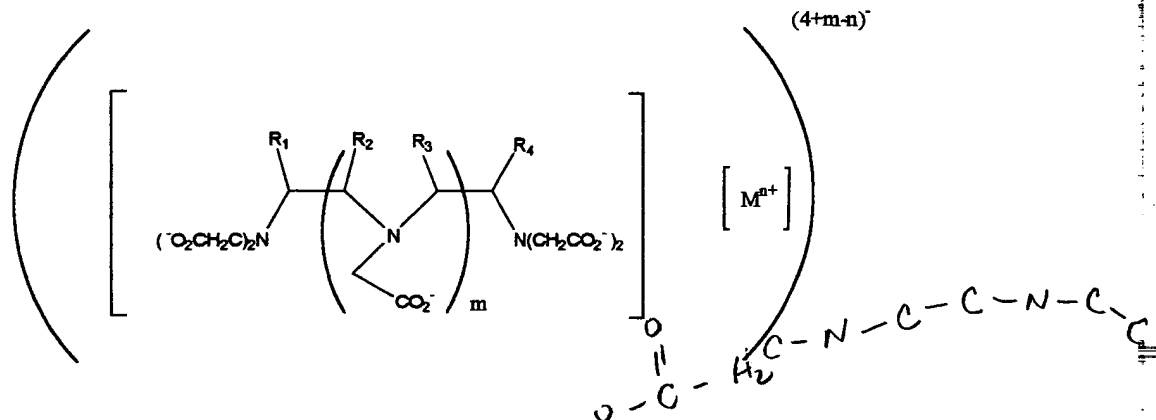
FLUORESCINAMINE ISOMER I (FLUORESCIN)

STRUCTURE B



I claim:

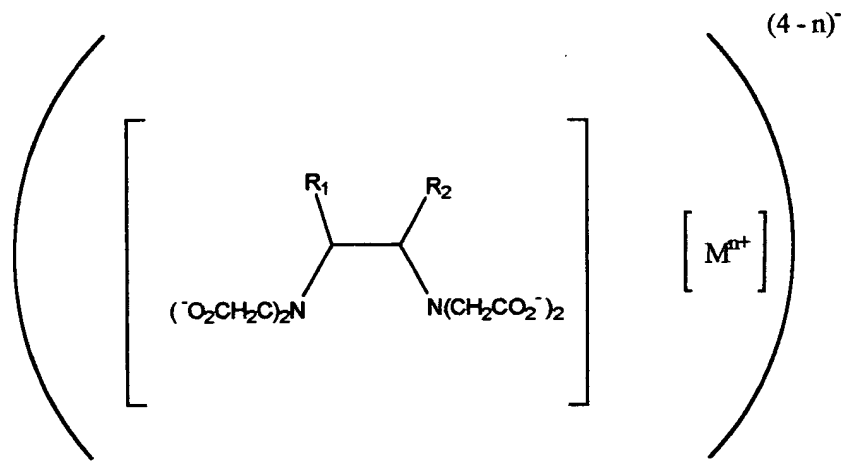
1. A chelate-fluorophore tracer composition comprising:
a metal-chelated reagent having the formula



wherein m is 0 or 1; n is 1, 2, or 3; R₁ is p-CH₂C₆H₄-X-Y or H, R₂ is H or p-CH₂C₆H₄-X-Y, and R₃ and R₄ are H, CH₃, or are fused into a ring system; X is -HNC(S)NH-, -NHC(O)- or -NH-C₃N₃Cl-NH-; Y is a fluorophore having a fluorescence lifetime and quantum yield suitable for monitoring hapten-antibody binding at nanomolar concentrations by fluorescence polarization; and M is a metal chelated thereto selected from the group consisting of bismuth, tin, lead, aluminum, gallium, indium, thallium, elements of Groups IIa, IIIa, IVa, Va, VIa, VIIa, VIII Ia, and VIII Ib of the Periodic Table of the Elements, elements of the lanthanide series of the Periodic Table of the Elements, and

elements of the actinide series of the Periodic Table of the Elements, excluding lawrencium.

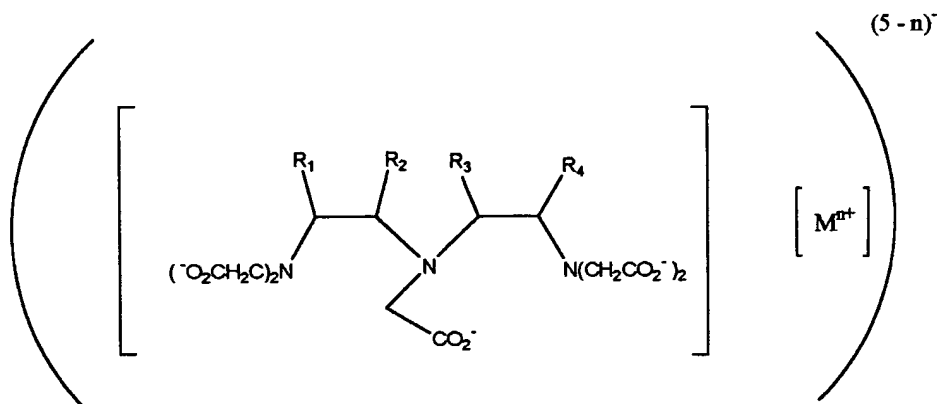
2. A chelate-fluorophore tracer composition comprising:
a metal-chelated reagent having the formula



wherein n is 1, 2, or 3; R₁ is *p*-CH₂C₆H₄-X-Y, R₂ is H; X is -HNC(S)NH-, -NHC(O)- or -NH-C₃N₃Cl-NH-; Y is a fluorophore having a fluorescence lifetime and quantum yield suitable for monitoring hapten-antibody binding at nanomolar concentrations by fluorescence polarization; and M is a metal chelated thereto selected from the group consisting of bismuth, tin, lead, aluminum, gallium, indium, thallium, elements of Groups IIa, IIIa, IVa, Va, VIa, VIIa, VIII Ia, and VIII Ib of the Periodic Table of the Elements, elements of the lanthanide series of the Periodic Table of the Elements, and

elements of the actinide series of the Periodic Table of the Elements, excluding lawrencium.

3. A chelate-fluorophore tracer composition comprising:
a metal-chelated reagent having the formula



wherein n is 1, 2, or 3; R_1 is $p\text{-CH}_2\text{C}_6\text{H}_4\text{-X-Y}$ or H , R_2 is H or $p\text{-CH}_2\text{C}_6\text{H}_4\text{-X-Y}$, and R_3 and R_4 are H , CH_3 , or are fused into a ring system; X is -HNC(S)NH- , -NHC(O)- or $\text{-NH-C}_3\text{N}_3\text{Cl-NH-}$; Y is a fluorophore having a fluorescence lifetime and quantum yield suitable for monitoring hapten-antibody binding at nanomolar concentrations by fluorescence polarization; and M is a metal chelated thereto selected from the group consisting of bismuth, tin, lead, aluminum, gallium, indium, thallium, elements of Groups IIa, IIIa, IVa, Va, VIa, VIIa, VIII Ia, and VIII Ib of the Periodic Table of the Elements, elements of the lanthanide series of the Periodic Table of the Elements, and